MPR-1412

MPR
Pharmaceutical Refrigerators

+2°C to +23°C

1364 L / 1359 L (R type)

The MPR-1412 (shelves) and MPR-1412R (drawers) pharmaceutical refrigerators deliver stable, reliable temperature control for clinical, pharmaceutical, biomedical storage and processing. Fast recovery following door openings assures safe storage even with frequent access and high ambient conditions and to remove heat loads generated by powered instruments.

Airflow Assures Quick Recovery, Interior Uniformity

Vertical, forced air circulation with dual blowers creates a uniform temperature at all shelf or drawer levels, top to bottom and front to back. Internal shelf or drawer clearances permit positive airflow to help restore temperature to setpoint following door openings, and safely accommodates busy, high traffic demand for access to stored contents in pharmacies, clinics and hospitals.

Precision Temperature Control Protects Inventory

Because many pharmaceuticals are degraded or destroyed if accidentally frozen, it is important that temperature be adjusted to desired setpoint in accordance with drug manufacturers' insert specifications. MPR Series pharmaceutical refrigerators operate over a temperature range of 2°C to 23°C. Actual interior air temperature is displayable in 0.1°C increments.

Choose Your Inventory Management Preference

The MPR Series pharmaceutical refrigerator offers two choices in inventory management. The MPR-1412 includes 4 open-wire shelves strong enough to hold bulk loads. The MPR-1412R is equipped with heavy-duty, fully-extendable painted steel pull-out drawers for more convenient access to the stored product such as large bottles or reagent kits.

Airflow Prevents Temperature Stratification

The top-mounted air circulation blower directs air downward so it goes along the back, side and front of the load-in drawers or shelves. Regardless of location, all products are subjected to the same safe temperature to assure repeatability of stored product viability.

Microprocessor Controls Simplify Operation

A microprocessor controller monitors all functions. Setpoint is factory set at 5°C. A soft key interface allows setpoint adjustment throughout the operating range. Audible and visual warnings indicate door ajar or temperature deviation from setpoint. The large easy-to-read LED display confirms actual temperature.

Adjustable Shelves Offer Flexibility in Storage Options

Open wire shelves (shown) are adjustable to allow for loads of varying heights such as bulk storage or process equipment such as fraction collectors. The Model MPR-1412R with pull-out drawers (not shown) offers a practical solution with additional ergonomic advantages.

MPR-1412R

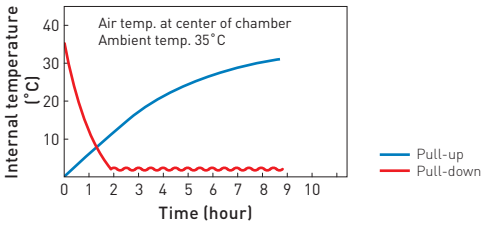
Large Capacity Laboratory Refrigerators

Cycle Defrost Function

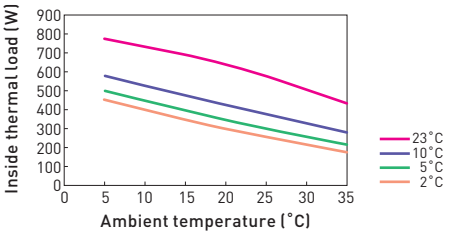
The cycle defrost and evaporator temperature sensor system ensures that defrost occurs only when necessary and automatically, so there is no need to turn off the power for defrosting. Irregular temperature increase during defrost is minimal with no temperature spikes. The evaporation heater also doubles as protection against drops in cabinet temperature caused by a low ambient temperature.

Performance Data

AT35˚C Pull-down & Pull-up Temperature

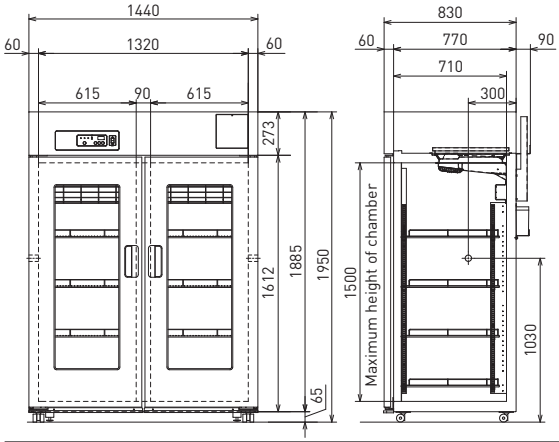


Test of permissible inside thermal load



Dimensions

Unit: mm



Model Number		MPR-1412-PE/MPR-1412-PK MPR-1412-PA	MPR-1412R-PE/MPR-1412R-PK MPR-1412R-PA
External dimensions (W x D x H) [1]	mm	1440 x 830 x 1950	
Internal dimensions (W x D x H)	mm	1320 x 710 x 1500	
Volume	litres	1364	1359
Net weight	kg	248	287
Performance			
Temperature control range		+2°C to +14°C [2]	+2°C to +23°C [3]
Control			
Controller		Microprocessor with non-volatile memory (Safety Lock with keypad)	
Digital temperature display		LED	
Temperature sensor		Thermistor	
Refrigeration			
Cooling method		Forced cool air circulation	
Defrost method		Cycle defrost + forced defrost	
Refrigerant		HFC and HFO combined (CFC-Free)	
Insulation		Rigid polyurethane foamed insulation (CFC-free)	
Construction		**MPR-1412**	**MPR-1412R**
Exterior material		Painted Steel	
Interior material		Painted Steel	
Outer doors	qty	2, Double pane glass (Self closing)	
Outer door lock		Y	
Shelves	qty	8 wire shelves (polyethylene-coated, 530 x 604 mm, adjustable)	—
Drawers	qty	—	10 solid steel drawers (painted steel, 550 x 530 x 100 mm)
Max. load - per shelf / drawer	kg	50	40
Access port	qty	3	
Access port position		Left / right / top	
Access port diameter	Ø mm	30	
Casters	qty	4	
Interior light		Fluorescent lamp	
Alarms		**(V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)**	
Power failure		R (V-B optional) [4]	
High temperature		V-B-R	
Low temperature		V-B-R	
Door open		V-B	
Electrical and Noise Level			
Power supply	V	PE: 220/230/240 PK: 220 PA: 115	
Frequency	Hz	PE: 50 PK, PA: 60	
Noise level [5]	dB (A)	48	
Options			
Temperature chart recorder		MTR-0621LH-PE	
- Chart paper		RP-06-PW	
- Recorder housing		MPR-S30-PW	
Circular type recorder		MTR-G04C-PE	
- Chart paper		RP-G04-PW	
- Ink pen		PG-R-PW	
- Recorder housing		MPR-S7-PW	
External mounting power failure alarm		MPR-48B1-PW [4]	
Blackout panel		MPR-72BP-PW	
Optional Communication Systems			
Digital interface (RS232C/RS485) [6]		MTR-480-PW	
Ethernet interface (LAN) [6]		MTR-L03-PW	
Quality Management System		**-PA/-PE** / **-PK**	**-PA/-PE** / **-PK**
Certification		ISO9001 / ISO13485	ISO9001 / ISO13485

[1] External dimensions of main cabinet only, excluding external projections - See dimensions drawings on website for full details

[2] Air temperature measured at refrigeration compartment centre at AT; -5°C to 0°C, no load

[3] Air temperature measured at refrigeration compartment centre at AT; 0°C to 35°C, no load

[4] Remote alarm comes with optional power failure alarm MPR-48B1-PW (V-B alarm)

[5] Nominal value - Background noise 20 dB (A)

[6] Only for MTR-5000 (data acquisition system) users.

- Appearance and specifications are subject to change without notice.

Caution: PHC Corporation guarantees this product under certain warranty conditions. However, please note that PHC Corporation shall not be responsible for any loss or damage to the contents of the product.

Preservation Equipment, Experimental Environment Equipment, Dispensary Equipment, Culturing Equipment and Drying & Sterilising Equipment for General Laboratory use

The management of the design, development, production and servicing of the above.

Freezers, Refrigerators, Incubators, and Drying and Sterilising Equipment for Medical use

The management of the design, development, production and distribution of the above.

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